

**CLAIMS:**

1. A beta-glucan-containing processed cereal grain product which when mixed with water at temperatures of between approximately 0 to 55 degrees C releases at least approximately 60 % of the beta-glucan into the water, the beta-glucan so released having an average molecular weight at least greater than approximately 100,000 Daltons and/or a specific viscosity greater than approximately 2.0 cSt at beta-glucan concentrations of approximately 0.5 % by weight.
- 5 2. A beta-glucan-containing processed cereal grain product which when mixed with water in a weight to volume ratio of approximately 1 to 20 at temperatures of approximately 37 degrees C for one hour releases at least approximately 60 % of the beta-glucan into the water, the beta-glucan so released having an average molecular weight at least greater than approximately 100,000 Daltons.
- 10 3. A beta-glucan-containing processed cereal grain product which when mixed with water in a weight to volume ratio of approximately 1 to 20 at temperatures of approximately 37 degrees C for one hour releases at least approximately 60 % of the beta-glucan into the water, the beta-glucan so released having a specific viscosity greater than approximately 2.0 cSt at beta-glucan concentrations of approximately 0.5 % by weight.
- 15 4. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 3 wherein the product is a flour.
- 5 5. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 4 wherein the product is derived from cereal having a beta-glucan content greater than 6 % by weight.
- 25 6. A beta-glucan-containing processed cereal grain product as claimed in claim 5 wherein the product is derived from cereal having a beta-glucan content greater than 9% by weight.

7. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 6 wherein the amount of beta-glucan released is greater than 75 %.
8. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 7 wherein the average molecular weight of the beta-glucan released is greater than approximately 500,000 Daltons and/or the specific viscosity at beta-glucan concentrations of approximately 0.5 % is greater than approximately 20.0 cSt.  
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9. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 8 wherein the product contains additional components.
10. A beta-glucan-containing processed cereal grain product as claimed in any one of claims 1 to 9 wherein starch within the product is physically modified.  
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11. A method for producing a beta-glucan-containing product comprising at least heating beta-glucan-containing cereal grain above approximately 60 degrees C in the presence of greater than approximately 50 % water by weight followed by drying.  
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12. A method as claimed in claim 11 wherein the method comprises at least the steps of:  
Mixing a beta-glucan-containing cereal grain with water to provide a mixture having greater than 50% by weight water;  
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Heating the mixture to above approximately 60 degrees C; and  
Drying the mixture.
13. A method as claimed in claim 12 wherein the mixing of the cereal grain with water occurs prior to heating.  
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14. A method as claimed in claim 12 wherein the mixing of the cereal grain with water and heating occur simultaneously.

15. A method as claimed in any one of claims 11 to 14 wherein the cereal grain contains greater than 6 % beta-glucan.

16. A method as claimed in claim 15 wherein the cereal grain contains greater than 9%  
5 beta-glucan.

17. A method as claimed in any one of claims 11 to 16 wherein the cereal grain is chosen from one or more of barley and/or oats.

10 18. A method as claimed in any one of claims 11 to 17 wherein the cereal grain is a mixture of different cereal grains.

19. A method as claimed in any one of claims 11 to 18 wherein the cereal grain is a processed cereal grain.

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20. A method as claimed in claim 19 wherein the processed cereal grain is a flour.

21. A method as claimed in claim 20 wherein the flour is enriched for beta-glucan.

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22. A method as claimed in any one of claims 11 to 21 wherein the mixture is heated to a temperature greater than approximately 90 degrees C.

23. A method as claimed in any one of claims 11 to 22 wherein the mixture is milled to a flour following drying.

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24. A method as claimed in any one of claims 11 to 23 wherein the method further comprises the step of adding one or more components or ingredients to the cereal grain and/or physically modifying and/or partially enzyme hydrolysing starch present in the cereal grain prior to, during, or after processing.

25. A beta-glucan-containing product produced by a method of any one of claims 11 to

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26. A food product comprising at least a beta-glucan-containing product as claimed in any one of claims 1 to 10 or 25.

27. A food product as claimed in claim 26 wherein the food product is bread.

28. A food product as claimed in claim 26 wherein the food product is pasta.

5 29. A food product as claimed in claim 26 wherein the food product is a processed food bar.

30. A pharmaceutical composition comprising at least a beta-glucan-containing product as claimed in any one of claims 1 to 10 or 25.

31. A process for making a food product comprising at least the step of preparing a  
10 beta-glucan-containing product as claimed in any one of claims 1 to 10 or 25.

32. The use of a beta-glucan-containing product as claimed in any one of claims 1 to 10 or 25 in the manufacture of a medicament for moderating glycaemic response and/or lowering serum cholesterol levels and/or alleviating constipation.

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33. A method of moderating glycaemic response and/or lowering serum cholesterol levels, and/or alleviating constipation in a subject, the method comprising at least the step of administering to a subject a beta-glucan-containing product as claimed in any one of claims 1 to 10 or 25.

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